

Conclusions and Recommendations

Overall, most mothers were able to answer the questions on their child's eating habits by reporting to a variety of recall strategies, such as the recall of preferences and special events, the recall of a child's specific eating habits (likes or dislikes), or using references such as the presence of a menu, snacking policies at school or with afterschool sports, and rules established for eating away from home.

Mothers did not generally struggle with terminology used in the questions, but there were some words and concepts that require clarification to improve mothers' ability to answer the questions more easily. First, clarification for the term "regular milk" should be added. Additionally, as mothers in both waves of the study commented, the questions are very clear about what to include, but not clear about what to include in the responses, particularly for questions on other vegetables, and potatoes that were not fried.

Perhaps most problematic for the mothers participating in this study were problems encountered due to the combination between limits on the ability to recall what foods were consumed and the desire to reflect socially acceptable and beneficial eating behaviors for young children. Mothers struggled with addressing the fluctuation from day to day in the kinds of foods their child may have consumed, particularly for items consumed regularly, such as milk, fruits and vegetables and 100% fruit juice. This impacted their preference for supplying an answer for only the past twenty-four hours, as well as their ability to develop a response for the past seven days. A key emerging theme was the existence of a tension between the desire to be accurate in their responses and the inability to remember every opportunity for consumption of the particular food item. The accompanying conversations with mothers provide some limited indication that this was in part due to the desire to "talk a good diet," as some mothers provided commentary on the health benefits of particular choices. Mothers repeatedly wanted to provide the most accurate answer in their responses, particularly in regards to questions about healthy foods choices, like vegetables and fruits. In response to the need to select one choice in answering a question, many mothers commented that they wished the questions were clearer about whether an average response was a correct answer, particularly if they wanted to use the daily response options.

The findings also illustrate the need for additional reminders to help mothers recall all other opportunities where their child may have consumed a food. The cognitive interviewing and focus groups revealed some areas when mothers grossly underestimated the number of times their child consumed a food item. The most common reason for underestimation stemmed from the fact that mothers often forgot to include times such as school, play dates, or sporting activities in their responses. Cognitive probing revealed that many mothers just didn't think of these times automatically. Mothers needed the reminder to include eating that occurred outside of the presence no matter how scheduled their patterns of feeding the child might have been. Additionally, language or instruction prior to the eating habit questions needs to be added to the questionnaire to help mothers focus on the food their child actually consumed, and not what they offered or prepared. Recall that a popular strategy for determining what the child had consumed was for mothers to reflect on what meals they had prepared over the course of the week, or what food they have offered, without any clear reflection on whether or not the child had actually consumed the item. A similar problem occurred when considering foods children may have

consumed at school: mothers know what they sent packed in a lunch or snack, but unless the child came home with the food, they was no clear way for mothers to determine if what was offered was actually eaten. While the school consumption is harder to track, wording can be added to help mothers distinguish between what was offered and was actually eaten.

While the “1 to 2 times a day” option was used by mothers and did seem to address a core problem, it may be possible to resolve the issue in some other fashion that does not alter the responses to prohibit comparability with the Grade 5 ECLS questions. This could be accomplished by providing language that will give mothers clear guidance on whether their answers should be averages or as precise as possible. This language would assist the development of responses by helping mothers to focus more specifically on how they should count the items they are considering for inclusion in their responses, and also provide a solution to whether or not the “1 to 2 times per day” option is indeed viable. If the guidance provided instructs respondents to calculate their answers as an average, then mothers would have less need for an option like “1to 2 times per day”, which functions well because it allows mothers to account for fluctuation in daily consumption patterns. If they are calculating an average, mothers could more readily make a determination between options like “1 time a day”, or “2 times a day.”

Most mothers were able to recall what their child consumed over the past twenty-four hours more easily than over the past seven days. However, while mothers admitted that this would be much easier, there was some hesitancy on the part of mothers for answering in this manner. Barriers to answering for just the past twenty-four hours included the tensions mothers experienced in wanting to provide the response that best described what their child ate, combined with the concern that answering for a day did not reflect the best of their child’s eating habits, particularly if the day in question did not follow the “normal” schedule. The findings suggest that that the best way to for mothers to answer the questions would be either to provide clear instructions asking for an average for the week, or to ask specifically about fewer days—a one to three-day period was suggested by mothers in this study. Overall, the findings suggest that it is easier for mothers to tally foods on a daily basis than recalling what was consumed over the whole week. This tallying method could be applied to either answering for the past twenty-four hours, or providing a response for the past seven days. However, based on the data provided by mothers in this study, using only the past twenty-four hours would limit the answers mothers give to questions on green salad, fast food, French fries and fried potatoes, other vegetables, consumption of soda pop and drinks that were not 100% fruit juice, and to a lesser extent, candy, ice cream, cookies and similar items, as well as potato chips, pretzels, Fritos, and other salty snack foods.

However, the underlining issue of whether or not it is acceptable or desirable to provide an average response for a given time period (twenty-four hours, past seven days or some other time frame) would need to be clarified in order to improve respondents’ ability to answer the questions, particularly when additional language asking respondents to consider a wider range of potential eating times is added to the questions.

The following discussion presents the recommendations developed for the eating habit questions. The recommendations were developed after careful review of the findings in both Wave 1 and 2.

The discussion presents the original question, the revised question and the rationale for making changes. The original eating habit question is presented first.

Q1: During the past 7 days, how many glasses of milk did your child drink? Include all types of milk, including cow's milk, soy milk or any other kind of milk; include the milk your child drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.

1 *Child did not drink milk during the past 7 days.*

2 *1 to 3 glasses during the past 7 days.*

3 *4 to 6 glasses during the past 7 days.*

4 *1 glass per day.*

5 *2 glasses per day.*

6 *3 glasses per day.*

7 *4 or more glasses per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q1: During the past 7 days, including school activities, play dates, sports, and the weekend, how many glasses of milk did your child drink? Include all types of milk, including cow's milk, soy milk or any other kind of milk; include the milk your child drank in a glass or cup, from a carton, or with cereal. Count the half pint of milk served at school as equal to one glass.

1 *Child did not drink milk during the past 7 days*

2 *1 to 3 times during the past 7 days*

3 *4 to 6 times during the past 7 days*

10 *1 time per day*

5 *2 times per day*

6 *3 times per day*

7 *4 or more times per day*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: Adding the statement referencing other times where a child may have consumed the food provided more complete responses by mothers in Wave 2 of the study, although it may have also complicated the tallying process for some mothers using the times per day response options. However, the inclusion of the statement did prompt mothers to consider a wider range of times when their child may have consumed a food item in the question set than the original question did. Changing “glasses” to “times” makes all of the response options consistent and removes the possibility that mothers become frustrated by calculations that convert glasses to servings and then to “times.”

Q2. What kind of milk did your child usually (most often) drink during the past 7 days?

- 1 *Whole milk*
- 2 *2% milk.*
- 3 *Skim milk.*
- 4 *Low fat or 1% milk.*
- 5 *Soy milk.*
- 6 *Both regular milk and soy milk.*
- 7 *Some other kind of milk.*
- DK *DON'T KNOW*
- RF *REFUSED*

Revised Q2. What kind of milk did your child usually (most often) drink during the past 7 days?

- 1 *Whole milk*
- 2 *2% milk.*
- 3 *Skim milk.*
- 4 *Low fat or 1% milk.*
- 5 *Soy milk.*
- 6 *Both **regular cow's milk** and soy milk.*
- 7 *Some other kind of milk.*
- DK *DON'T KNOW*
- RF *REFUSED*

Rationale: The wording of “regular cow’s milk” improved mothers understanding of the question by making the response option clearer. Add a response option to account for mothers whose child did not consume any milk. The question set as tested did not include a skip pattern for mothers who provided the response “my child did not consume milk in the past seven days” in question 1. Either a skip pattern should be added, referring these respondents directly to question 3, or a response option of “none of the above, child didn’t drink milk” needs to be added to question 2.

Q3. During the past 7 days, how many times did your child drink 100% fruit juices such as orange juice, apple juice, or grape juice? Do not count punch, Sunny Delight, Kool-Aid, sports drinks, or other fruit-flavored drinks.

1 *Child did not drink 100% fruit juice during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q3. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child drink 100% fruit juices such as orange juice, apple juice, or grape juice? Do not count punch, Sunny Delight, Kool-Aid, sports drinks, or other fruit-flavored drinks.

1 *Child did not drink 100% fruit juice during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: The rationale for the statement referencing additional times where children may be consuming food is described above. No other changes are recommended.

Q4. During the past 7 days how many times did your child drink Soda pop (for example, Coke, Pepsi, or Mountain Dew), sports drinks (for example, Gatorade), or fruit drinks that are not 100% fruit juice (for example, Kool-Aid, Sunny Delight, Hi-C, Fruitopia, or Fruitworks)?

1 *Child did not drink any during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q4. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child drink Soda pop (for example, Coke, Pepsi, or Mountain Dew), sports drinks (for example, Gatorade), or fruit drinks that are not 100% fruit juice (for example, Kool-Aid, Sunny Delight, Hi-C, Fruitopia, or Fruitworks)?

1 *Child did not drink any during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: In addition to the prompting statement described above, no changes are recommended. It should be mentioned that findings in both waves of the study indicate that this question does have some sensitive aspects for parents, ones that may cause them to talk a good diet and underestimate the number of sodas their child consumed.

Q5. During the past 7 days, how many times did your child eat fresh fruit such as apples, bananas, oranges, berries, or other fruit such as applesauce, canned peaches, canned fruit cocktail, or frozen berries? (Do not count fruit juice.)

1 *Child did not eat fruit during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q5. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child eat fresh fruit such as apples, bananas, oranges, berries, or other fruit such as applesauce, canned peaches, canned fruit cocktail, frozen berries or dried fruit? (Do not count fruit juice.)

1 *Child did not eat fruit during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: Adding the words dried fruit made the list of fruit choices complete for mothers and provided them with an opportunity to include all fruit in their response.

Additional recommendation: Clearer guidance on self-service snacking and how to count it should be developed. This was one of the most challenging questions for mothers to ask due to the popularity of fruit and the variability with which it was consumed by children in this age category. In order to address the frustration mothers experienced when tallying the fruit for the times per day option and to address underestimates, guidance on the accuracy desired for the response would be helpful. Specifically, mothers need some direction on how to calculate a “time” for self-service snacking.

Q6. During the past 7 days, how many times did your child eat green salad?

1 *Child did not eat green salad during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q6. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child eat green salad?

1 *Child did not eat green salad during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: In addition to the prompting statement described above, no changes are recommended.

Q7. During the past 7 days, how many times did your child eat potatoes? (DO NOT count French Fries, fried potatoes, or potato chips).

1 *Child did not eat potatoes during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK DON'T KNOW

RF REFUSED

Revised Q7. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child eat potatoes? (DO NOT count French Fries, fried potatoes, potato chips, tater tots, or sweet potatoes).

1 *Child did not eat potatoes during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK DON'T KNOW

RF REFUSED

Rationale: In addition to the prompting statement described above, adding the wording tater tots and sweet potatoes assisted mothers in knowing what kinds of potatoes to exclude from their response to this question.

Q8. During the past 7 days, how many times did your child eat carrots?

1 *Child did not eat carrots during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK DON'T KNOW

RF REFUSED

Revised Q8. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child eat carrots?

1 *Child did not eat carrots during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK DON'T KNOW

RF REFUSED

Rationale: In addition to the prompting statement described above, no changes are recommended.

Q9. During the past 7 days, how many times did your child eat other vegetables? (DO NOT count green salad, potatoes, French fries, or carrots.)

1 *Child did not eat other vegetables during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q9. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child eat other vegetables? (DO NOT count green salad, potatoes, French fries, or carrots.)

1 *Child did not eat other vegetables during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: In addition to the prompting statement described above, better wording or clearer instruction should be provided for Q 9 to help mothers know how to classify vegetables served in mixes, or as the main component of a main dish need to be added based on the findings of both Wave 1 and Wave 2. This clarification would help mothers to produce more accurate counts to incorporate in their responses. The recommended statement is phrased as “*Include vegetables like those served as a stir fry, soup or stew in your response.*”

Q10. During the past 7 days, about how many times did your child eat a meal or snack from a fast food restaurant such as McDonald's Pizza Hut, Burger King, KFC (Kentucky Fried Chicken), Taco Bell, Wendy's and so on? Would you say?

1 *Child did not eat food from a fast food restaurant during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q10. During the past 7 days, including school activities, play dates, sports, and the weekend about how many times did your child eat a meal or snack from a fast food restaurant with no wait service such as McDonald's, Pizza Hut, Burger King, KFC (Kentucky Fried Chicken), Taco Bell, Wendy's and so on? Consider both eating out, carry out and delivery of meals in your response. Would you say:

1 *Child did not eat food from a fast food restaurant during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: The addition of this language appeared work well in clarifying the kinds of places mothers should consider in answering the question about fast food. In particular, focus group respondents did not seem to struggle with including any meal that their child had eaten out at any type of restaurant in their response to the revised question. This wording seemed to alleviate mothers conceptualizing fast food as any eating outside of the home.

Q11. During the past 7 days, how many times did your child eat candy, ice cream, cookies, cakes, brownies, or other sweets? Would you say:

1 *Child did not eat sweets during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q11. During the past 7 days, including afterschool activities, sports, and the weekend, how many times did your child eat candy (including Fruit Roll Ups and similar items), ice cream, cookies, cakes, brownies, or other sweets? Would you say:

1 *Child did not eat sweets during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: In addition to the prompting statement described above, adding the wording "Fruit Roll-Ups or similar snacks" helped mothers to know where to classify these food items. Reporting for sweet snacks was a sensitive topic, one that may be subject to underestimates. In describing their answers, mothers repeated their practices of trying not to offer too many of these items to their child, perhaps in an effort to talk a good diet. As one respondent put it, "parents know their kids aren't supposed to have a lot of snacks, but they do serve them and there is some guilt there." [not really clear what this means] A few respondents suggested that framing the question responses as averages or what is normal consumption would help relieve some of the sensitivity associated with this question.

Q12. During the past 7 days, how many times did your child eat potato chips, corn chips (Fritos, Doritos), Cheetos, pretzels, popcorn, crackers or other salty snack foods?

1 Child did not eat salty snack foods during the past 7 days.

2 1 to 3 times during the past 7 days.

3 4 to 6 times during the past 7 days.

4 1 time per day.

5 2 times per day.

6 3 times per day.

7 4 or more times per day.

DK DON'T KNOW

RF REFUSED

Revised Q12. During the past 7 days, including school activities, play dates, sports, and the weekend how many times did your child eat potato chips, corn chips (Fritos, Doritos), Cheetos, pretzels, popcorn, crackers or other salty snack foods?

1 Child did not eat salty snack foods during the past 7 days.

2 1 to 3 times during the past 7 days.

3 4 to 6 times during the past 7 days.

4 1 time per day.

5 2 times per day.

6 3 times per day.

7 4 or more times per day.

DK DON'T KNOW

RF REFUSED

Rationale: In addition to the prompting statement described above, no other changes are recommended. However, it should be noted that some mothers in both waves of the study perceived this question as sensitive. These mothers felt that some of the snacks on the list were "better" for their child than others and did not want to classify them with items such as Doritos, potato chips, or Cheetos.

Q13. During the past 7 days, how many times did your child eat French fries or fried potatoes?

1 *Child did not eat French fries or fried potatoes during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Revised Q13. During the past 7 days, including school activities, play dates, sports, and the weekend, how many times did your child eat French fries or fried potatoes?

1 *Child did not eat French fries or fried potatoes during the past 7 days.*

2 *1 to 3 times during the past 7 days.*

3 *4 to 6 times during the past 7 days.*

4 *1 time per day.*

5 *2 times per day.*

6 *3 times per day.*

7 *4 or more times per day.*

DK *DON'T KNOW*

RF *REFUSED*

Rationale: In addition to the prompting statement described above, this question should be moved to appear after the potato question, and be the new Question 8. Mothers in Wave 2 recommended that this question be paired conceptually with the question on potatoes. They suggested that such a pairing would help mothers answer the question by making it easier to recall and answer questions on potato consumption. Also moving the question to follow after the original question 7 lessens the probability that mothers who answered the fast food question will view this question as asking for the same information (a few mothers in wave two focus group did believe that the fast food question and the question on fried potatoes referred to the exact same foods and viewed them as repetitive).